

List of Claims:

Claim 1 (original): A method for depositing micro-lenses on a semiconductive circuit comprising the steps of:

successively applying a plurality of coats of micro-lens suitable material to the surface of a semiconductive circuit wherein the current coat is imparted with a succeeding one of a plurality of lens formation patterns;

removing unwanted portions of the current coat of micro-lens suitable material;
and

forming a plurality of micro-lenses from the remaining portion of the current coat of micro-lens suitable material.

Claim 2 (original): The method of Claim 1 wherein the step of imparting the current coat with one of a plurality of lens formation patterns is accomplished by:

placing a formation mask that embodies one of the plurality of lens formation patterns proximate to the current coat of micro-lens suitable material; and

aligning the formation mask to the semiconductive circuit;

irradiating the formation mask.

Claim 3 (original): The method of Claim 1 wherein the plurality of lens formation patterns are alternate counterparts of each other.

Claim 4 (original): A method for depositing micro-lenses on a semiconductive circuit comprising the steps of:

applying a first coat of micro-lens suitable material to the surface of a semiconductive circuit;

imparting a first lens formation pattern onto the first coat of micro-lens suitable material;

removing unwanted portions of the first coat of micro-lens suitable material;

forming a first plurality of micro-lenses from the remaining first coat of micro-lens suitable material;

applying a second coat of micro-lens suitable material to the semiconductive circuit;

imparting a second lens formation pattern to the second coat of micro-lens suitable material;

removing unwanted portions of the second coat of photo-resist; and

forming a second plurality of micro-lenses from the remaining second coat of micro-lens suitable material.

Claim 5 (original): The method of Claim 4 wherein the first and second lens formation patterns are alternate counterparts of each other.

Claim 6 (original): The method of Claim 5 wherein the first and second lens formation patterns comprise rectangular regions in a checkerboard pattern.

Claim 7 (original): The method of Claim 6 wherein rectangular regions comprise broken corners to avoid continuity with neighboring regions.

Claim 8 (original): The method of Claim 4 wherein the step of forming the first and second plurality of micro-lenses comprise the steps of:

raising the temperature of the micro-lens suitable material in order to relieve the surface tension thereof;

allowing the micro-lens suitable material to reflow in order to achieve a desired lens focal length; and

reducing the temperature of the micro-lens suitable material in order to preserve the achieved lens focal length.

Claim 9 (original): The method of Claim 1 wherein the step of applying the first and second coats of micro-lens suitable material comprise the step of spin coating a micro-lens suitable material onto the semiconductive circuit.

Claim 10 (original): The method of Claim 1 wherein the step of imparting the a first lens formation pattern onto the first coat of micro-lens suitable material comprises the steps of:

placing a first formation mask comprising the first lens formation pattern proximate to the first coat of micro-lens suitable material;

aligning the first formation mask relative to the semiconductive circuit; and
illuminating the first formation mask with radiation.

Claim 11 (original): A method for depositing micro-lenses on a semiconductive circuit comprising the steps of:

applying a first coat of micro-lens suitable material to the surface of the semiconductive circuit;

imparting a first lens formation pattern onto the first coat of micro-lens suitable material;

removing unwanted portions of the first coat of micro-lens suitable material;

applying a second coat of micro-lens suitable material to the to the surface of the semiconductive circuit;

imparting a second lens formation pattern onto the second coat of micro-lens
suitable material;
removing unwanted portions of the second coat of micro-lens suitable material;
and
forming a plurality of micro-lenses from the remaining portions of the first and
second coats of micro-lens suitable material.

Claims 12-32 (canceled)